REMARKS

Claims 11-30 and 34-36 are pending and stand rejected. Claims 31-33 are withdrawn. No claim amendments are made herein.

35 U.S.C. § 102 Rejections

Claims 11-30 and 34-36 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Wolfinger et al (U.S. Patent No. 6,415,259 B1). Applicants respectfully traverse this rejection.

The claimed invention generates a proposed schedule of tasks for a project. Each task has associated resources, such as workers, that are utilized to perform the task. Resources available to perform the tasks can fluctuate over the schedule. These fluctuations can incur costs, such as the salaries of idle workers during periods of low resource utilization, overtime payments to workers during periods of high resource utilization, and the costs associated with hiring and firing workers as needed. An embodiment of the claimed invention generates a proposed schedule of tasks for the project responsive to the fluctuations of resources utilized to perform the tasks, and modifies the proposed schedule responsive to the resource fluctuations and cost.

Independent Claim 17, for example, recites a method of generating a schedule of tasks for a project including the steps of:

> generating a proposed schedule of tasks for the project **responsive to fluctuations of resources** utilized to perform the tasks;
> evaluating the proposed schedule to **estimate an associated cost**;
> modifying the proposed schedule **responsive to the resource fluctuations and the cost**.

Independent claims 11 and 34 recites elements of systems for performing similar functions. The claimed invention can be used, for example, to create a schedule that minimizes resource fluctuations and costs.

Applicants submit that Wolfinger does not anticipate at least the claim elements related to evaluating and modifying a proposed schedule as claimed. Wolfinger describes an automatic work progress tracking and optimizing engine. At the high level, Wolfinger describes a system that automatically schedules customer orders and optimizes the schedule based on factors including work force utilization. Wolfinger briefly discusses "costs" in

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several places, including the Background (col. 1, lines 17-22, col. 2 line 19), Summary (col. 2, line 65), and claims (claims 22 and 45). Claims 22 and 45, in particular, state that an "offline distributed system" can optimize a schedule to minimize costs.

Wolfinger, however, does not provide disclosure sufficient to support the rejection of the pending claims. Wolfinger does not even mention the word "cost" in the Detailed Description, and does not provide any details of how the optimization to minimize costs is accomplished. Instead, Wolfinger relies on a "black box" element to perform the optimization: the scheduling engine 170. At col. 9, line 30, Wolfinger states that the scheduling engine is formed of 3rd party technology, specifically the ILOG Rules, Solver, and Scheduler products. But Wolfinger never describes how this technology is used to minimize costs. See, for example, col. 16 line 5 through col. 17, line 49, where Wolfinger describes the offline optimization process in detail. The scheduling engine receives multiple parameters related to time-based scheduling (e.g., priority, due date, starting times), but does not receive any parameters related to costs.

Since Wolfinger does not describe how the scheduling engine can be used with respect to costs, Wolfinger's disclosure does not enable the claimed invention. At the least, it would require undue experimentation to program the scheduling engine to perform the elements of the claimed invention related to costs. Accordingly, Applicants submit that Wolfinger does not support the rejection of the independent claims. See MPEP 2121.01.

The lack of disclosure in Wolfinger is further demonstrated by the citations made by the Examiner in rejecting the specific claim elements. The Examiner asserts that the step of "evaluating the proposed schedule to estimate an associated cost" is shown by Wolfinger at "col. 2, line 50+; col. 3-4, col. 6, line 55; col. 7, line 27+." Only col. 2, line 65 actually mentions costs and merely states that a schedule can be optimized to minimize costs. Columns 3-4 encompass Wolfinger's "objects of the invention," the Brief Description of the Drawings, and three irrelevant sentences of the Detailed Description. Column 6, line 55, describes constraints but does not mention costs. Column 7, line 27 describes different time zones related to optimization processing. At col. 7, lines 63-64, Wolfinger mentions that the goal of the optimization algorithm is to minimize idle time, but it does not describe the costs that might be incurred in reaching that goal.

Likewise, the portions of Wolfinger cited by the Examiner against the "modifying" claim element are not on point. The Examiner asserts that Wolfinger shows this element at

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col. 11, line 4 – col. 14, line 36. This portion describes revising a schedule and, at col. 12, lines 8-12, it describes how the scheduling engine can generate a "realistic workflow." However, the cited portion does not describe how the scheduling engine works and does not even contain the word "cost."

Moreover, claim 21 further recites that generating the proposed schedule includes "iteratively reducing the limitation for one of the resources and load-leveling the resources." Claim 22 recites that evaluating the proposed schedule includes "determining costs associated with the resource fluctuations." The Examiner asserts that the elements of both claims are found in col. 6, line 56 – col. 8, line 55. This portion of the Wolfinger encompasses a wide variety of subject matter but does not describe iteratively reducing limitations for a resource, load-leveling the resources, or determining costs associated with resource fluctuations as claimed.

Additionally, claims 14, 15, and 16 depend from claim 11 and contain limitations that were not specifically rejected by the Examiner. Claim 14 recites that the load leveler comprises a makespan minimizer configured to determine a minimum length schedule of tasks that uses at most a maximum number of resources to complete the tasks. Claim 15 recites that the makespan minimizer uses a schedule packing algorithm. Claim 16 recites that the cost minimizer of claim 11 comprises an incremental improvement engine that determines a start time for a task that results in a lowest estimated cost for the proposed schedule.

Accordingly, Applicants respectfully submit that the claimed invention is not anticipated by Wolfinger. Moreover, Applicants respectfully requests that the Examiner examine all of the pending claims, and fully state the reasons for any rejections issued in a subsequent Office Action. The dependent claims not specifically mentioned above incorporate the limitations of their base claims and are allowable for at least the same reasons.

For the above reasons, Applicants respectfully request allowance of the application. The Examiner is invited to contact the undersigned by telephone in order to advance the prosecution of this case.

Respectfully submitted,

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